UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,165	12/27/2000	Robert E. Sobol	10003840-1	4943

7590   02/01/2005

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EXAMINER
TUCKER, WESLEY J

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/749,165	SOBOL, ROBERT E.
	Examiner	Art Unit	
	Wes Tucker	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>16 August 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>27 December 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments and Amendments

1.   Applicant's response to the last Office Action, filed Dec 20, 2004, has been entered and made of record.

2.   Applicant has amended claims 1, 9-18, 21 and 22 were amended. Claims 23-30 have been added. Claims 1-30 are pending.

3.   Applicant's arguments have been fully considered and are not persuasive for at least the following reasons:

4.   Applicant argues that U.S. Patent 6,571,003 to Hillebrand does not disclose the claimed feature of "wherein said image enhancer is configured to initiate, without user intervention, manipulation of said portion for enhancing said appearance in response to identification of said portion by said image enhancer." Examiner disagrees and points out that Hillebrand discloses a totally automatic mode for operation as well as a user-directed mode (column 6, lines 15-16, column 7, lines 17-21 and 65-66, column 8, lines 33-36, 46-51 and 63-65, column 9, lines 5-7, 15-17 and 26-28, column 10, lines 51-52, column 12, lines 2-3 and 10-14). Hillebrand consistently states, "in one embodiment the steps are performed by the controller 200." This declaration is interpreted as the steps in the process take place entirely without user input based on data already programmed into the image processor or controller. Although Hillebrand allows for user input at nearly every step of the process, it is also indicated clearly that in one embodiment, the

steps are performed by the controller without user input. Rejection is maintained and

the action is made final.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
in section 102 of this title, if the differences between the subject matter sought to be patented and the
prior art are such that the subject matter as a whole would have been obvious at the time the invention
was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability
shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5-12, and 14-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over the combination of U.S. Patent 6,445,819 to Kinjo and U.S. Patent

6,571,003 to Hillebrand et al.

6.   With regard to claim 1, Kinjo discloses an image enhancement system,

comprising memory for storing digital data that defines a graphical image (Fig.1,

element 48) and a face detector configured to analyze said digital data and to

automatically identify facial data within said digital data stored in said memory (Fig.2,

element 100).

Kinjo discloses an image enhancer, but does not disclose automatically

identifying a portion of said facial data that defines a particular facial feature and

automatically enhancing an appearance of said facial feature within said graphical

image, <u>wherein said image enhancer is configured to initiate, without user intervention,</u>

manipulation of said portion for enhancing said appearance in response to identification

of said portion by said image enhancer.

Hillebrand discloses an image enhancer configured to automatically detect and

locate defect areas in a face image and to create an improved or worsened area for

each of the defect areas (column 2, lines 15-30). Once a face has been detected in a

digital image, several different processes are used to change portions of that image in

order to enhance the appearance of that image. Therefore it would have been obvious

to one of ordinary skill in the art at the time of invention to employ Hillebrand's facial

enhancement system to modify all or part of the facial image detected in the face

detection of Kinjo in order to enhance the appearance of that image.

With regard to the amended part of the claim underlined above, Hillebrand also

discloses wherein the image enhancement occurs without any user intervention (column

6, lines 15-16, column 7, lines 17-21 and 65-66, column 8, lines 33-36, 46-51 and 63-

65, column 9, lines 5-7, 15-17 and 26-28, column 10, lines 51-52, column 12, lines 2-3

and 10-14). Hillebrand consistently states, "in one embodiment the steps are performed

by the controller 200." This declaration is interpreted as the steps in the process take

place entirely without user input based on data already programmed into the image

processor or controller. Although Hillebrand allows for user input at nearly every step of

the process, it is also indicated clearly that in one embodiment, the steps are performed

by the controller.

7.   With regard to claim 2, Kinjo and Hillebrand disclose input devices configured to

receive an input. Kinjo discloses a scanner (Fig.1, element 12). Hillebrand discloses

user input obtained from a user interface on what operations to perform and how to

determine facial portions to analyze and enhance (column 5, lines 30-42 and column 6,

lines 29-42). In the combination of Kinjo and Hillebrand, Hillebrand's image enhancer

would operate in accordance with the input configurations to perform operations on the

image input received by Kinjo's input device. The portion of the image to be modified or

the facial feature selected is based on these inputs.

8.   With regard to claim 3, Kinjo discloses said image enhancer to process color

correction, but does not specifically refer to color blending. Hillebrand discloses said

image enhancer to manipulate portions of an image by blending color values associated

with the defective portion with the color of the skin surrounding the defective portion

(column 2, lines 25-30 and column 12, lines 13-18).

9.   With regard to claim 5, Kinjo discloses said image enhancer, wherein

manipulating said portion, sharpens said appearance of said facial feature (column 10,

lines 65-67).

10.   With regard to claim 6, Kinjo discloses said image enhancer, wherein

manipulating said portion, changes a color of said facial feature (column 10, lines 60-

65).

11.   With regard to claim 7, Kinjo discloses said system including an image capturing

device configured to receive an image of a scene and to produce said digital data based

on said image received by said image capturing device (Fig.1, element 12). In this

embodiment the image capture device is a scanner.

12.   With regard to claim 8, Kinjo discloses said image capturing device including a

lens for receiving said image and an image converter for producing said digital data

based on said image (Fig. 1, elements 12, 28, and 32). The scanner contains a CCD

with lens (28) and analog to digital converter (32).

13.   With regard to claim 9, Kinjo discloses an automatic image enhancement system,

comprising means for storing digital data that defines a graphical image (Fig.1, element

48) and face detecting means for analyzing said digital data and for automatically

identifying facial data within said digital data stored in said storing means (Fig.2,

element 100).

       Kinjo does not explicitly disclose image enhancing means for analyzing said

facial data identified by said face detecting means, for automatically identifying a portion

of said facial data that defines a particular facial feature, and for automatically

manipulating upon identification of said portion by said image enhancing means said

portion to enhance an appearance of said facial feature within said graphical image.

Hillebrand discloses an image enhancer configured to automatically detect and
locate defect areas in a face image and to create an improved or worsened area for
each of the defect areas (column 2, lines 15-30). Once a face has been detected in a
digital image, several different processes are used to change portions of that image in
order to enhance the appearance of that image. Therefore it would have been obvious
to one of ordinary skill in the art at the time of invention to employ Hillebrand's facial
enhancement system to modify all or part of the facial image detected in the face
detection of Kinjo in order to enhance the appearance of that image.

With regard to the amended part of the claim underlined above, Hillebrand also
discloses wherein the image enhancement occurs without any user intervention (column
6, lines 15-16, column 7, lines 17-21 and 65-66, column 8, lines 33-36, 46-51 and 63-
65, column 9, lines 5-7, 15-17 and 26-28, column 10, lines 51-52, column 12, lines 2-3
and 10-14). Hillebrand consistently states, "in one embodiment the steps are performed
by the controller 200." This declaration is interpreted as the steps in the process take
place entirely without user input based on data already programmed into the image
processor or controller. Although Hillebrand allows for user input at nearly every step of
the process, it is also indicated clearly that in one embodiment, the steps are performed
by the controller.

With regard to claim 10, Kinjo discloses a method for enhancing graphical
images, comprising:

receiving digital data defining a graphical image (Fig. 1, elements 32, 36 and 14);

automatically detecting facial data within said digital data (Fig. 2, element 100).

Kinjo does not explicitly disclose searching said facial data for data that defines a

particular facial feature and automatically identifying, based on said searching step, a

set of data defining said particular facial feature; and automatically manipulating said set

of data in response to said identifying, wherein said manipulating is initiated without

user intervention.

Hillebrand discloses an image enhancer configured to automatically detect and

locate defect areas in a face image and to create an improved or worsened area for

each of the defect areas (column 2, lines 15-30). Once a face has been detected in a

digital image, several different processes are used to change portions of that image in

order to enhance the appearance of that image. Therefore it would have been obvious

to one of ordinary skill in the art at the time of invention to employ Hillebrand's facial

enhancement system to modify all or part of the facial image detected in the face

detection of Kinjo in order to enhance the appearance of that image.

With regard to the amended part of the claim underlined above, Hillebrand also

discloses wherein the image enhancement occurs without any user intervention (column

6, lines 15-16, column 7, lines 17-21 and 65-66, column 8, lines 33-36, 46-51 and 63-

65, column 9, lines 5-7, 15-17 and 26-28, column 10, lines 51-52, column 12, lines 2-3

and 10-14). Hillebrand consistently states, "in one embodiment the steps are performed

by the controller 200." This declaration is interpreted as the steps in the process take

place entirely without user input based on data already programmed into the image

processor or controller. Although Hillebrand allows for user input at nearly every step of

the process, it is also indicated clearly that in one embodiment, the steps are performed

by the controller.

14.   With regard to Claims 11-17, they repeat the elements in claims 2-8 with

reference to a method. With regard to depending claims 11-17, refer to the discussion

of claims 2-8 respectively. Claims 11-17 are amended only by eliminating the word

"step" in each claim.

15.   With regard to claim 18, the combination of Kinjo and Hillebrand applies as

discussed in regard to claim 9. Claim 9 cites all of the elements of claim 18, with the

exception of explicitly naming a facial skin blemish. Hillebrand discloses this feature

(column 2, lines 17-22 and column 6, lines 1-5). With regard to the new limitation

wherein said image enhancer is further configured to automatically manipulate, upon

locating said portion for enhancing an appearance of said skin blemish within said

graphical image, Hillebrand also discloses wherein the image enhancement occurs

without any user intervention (column 6, lines 15-16, column 7, lines 17-21 and 65-66,

column 8, lines 33-36, 46-51 and 63-65, column 9, lines 5-7, 15-17 and 26-28, column

10, lines 51-52, column 12, lines 2-3 and 10-14). Hillebrand consistently states, "in one

embodiment the steps are performed by the controller 200." This declaration is

interpreted as the steps in the process take place entirely without user input based on

data already programmed into the image processor or controller. Although Hillebrand

allows for user input at nearly every step of the process, it is also indicated clearly that

in one embodiment, the steps are performed by the controller.

16.   With regard to claim 19, Hillebrand discloses the image enhancer configured to

locate at least one additional facial feature and locate said portion of said facial data

defining said skin blemish by determining the likely proximity of said skin blemish to said

located at least one additional facial feature. Hillebrand discloses several methods of

sub-image determination (column 7, lines 16-40 and 60-65 and column 8, lines 5-10).

Hillebrand discloses locating sub-images such as an under eye border and then

discloses enhancing the image portion according to the defect type in that area such as

wrinkles blemishes red spots etc.

17.   With regard to claim 20, Hillebrand discloses the said blemish to be a wrinkle

(column 8, lines 5-8).

18.   With regard to claim 21, the discussions of claims 1, 9 and 18 apply. The

method is considered to be included in the system.

19.   With regard to claim 22, the discussion of claim 19 applies.

20.   With regard to claim 23, the combination of Kinjo and Hillebrand discloses the

system of claim 1, and Kinjo discloses detecting multiple face candidate regions (Fig. 2,

element 102 and Fig. 3) and in the combination of Kinjo and Hillebrand, image

enhancement would take place on any number of faces once they are detected.

21.   With regard to claim 24, the discussion of claim 23 applies.

22.   With regard to claim 25, the discussion of claim 23 applies.

23.   With regard to claim 26, the discussion of claim 23 applies.

24.   With regard to claim 27, the discussion of claim 1 applies. Hillebrand discloses

wherein the image enhancement occurs without any user intervention (column 6, lines

15-16, column 7, lines 17-21 and 65-66, column 8, lines 33-36, 46-51 and 63-65,

column 9, lines 5-7, 15-17 and 26-28, column 10, lines 51-52, column 12, lines 2-3 and

10-14). Hillebrand consistently states, "in one embodiment the steps are performed by

the controller 200." This declaration is interpreted as the steps in the process take

place entirely without user input based on data already programmed into the image

processor or controller. Although Hillebrand allows for user input at nearly every step of

the process, it is also indicated clearly that in one embodiment, the steps are performed

by the controller.

25.   With regard to claim 28 Kinjo discloses an automatic image enhancement

system, comprising memory (Fig. 1, element 48) for storing digital data that defines a

graphical image, said graphical image containing a plurality of faces (Fig. 2, elements 100 and 102). Kinjo disclose multiple face candidate regions.

Kinjo also discloses a face detector configured to detect each of said faces (Fig. 2, element 100).

Kinjo does not disclose an image enhancer configured to analyze said faces, said image enhancer further configured to automatically detect and enhance at least one respective facial feature in each of said faces.

Hillebrand discloses an image enhancer configured to automatically detect and locate defect areas in a face image and to create an improved or worsened area for each of the defect areas (column 2, lines 15-30). Once a face has been detected in a digital image, several different processes are used to change portions of that image in order to enhance the appearance of that image. This of course applies to multiple detected facial images. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to employ Hillebrand's facial enhancement system to modify all or part of the facial image detected in the face detection of Kinjo in order to enhance the appearance of that image.

Hillebrand also discloses wherein the image enhancement occurs without any user intervention (column 6, lines 15-16, column 7, lines 17-21 and 65-66, column 8, lines 33-36, 46-51 and 63-65, column 9, lines 5-7, 15-17 and 26-28, column 10, lines 51-52, column 12, lines 2-3 and 10-14). Hillebrand consistently states, "in one embodiment the steps are performed by the controller 200." This declaration is interpreted as the steps in the process take place entirely without user input based on

data already programmed into the image processor or controller. Although Hillebrand

allows for user input at nearly every step of the process, it is also indicated clearly that

in one embodiment, the steps are performed by the controller.

26.   With regard to claim 29, the discussion of claim 28 applies. The method is

disclosed in the use of the system.

28.   Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

the combination of Kinjo and Hillebrand in view of U.S. Patent 5,835,616 to Lobo.

29.   With regard to claim 4, Kinjo discloses said image enhancer, wherein

manipulating said portion, applies various image-processing techniques. Neither Kinjo

nor Hillebrand expressly disclose blurring the appearance of the facial feature. Lobo

discloses enhancing a facial image by blurring the image (Abstract). Lobo teaches that

the blurring filter is used to better set forth the facial features of the image (Abstract).

Blurring is a well-known image enhancing technique. Therefore it would have been

obvious to one of ordinary skill in the art at the time of invention to add blurring to the list

of available facial feature enhancing techniques listed by Kinjo in order to better set

forth the facial features of the image.

30.   With regard to claim 13, the discussion of claim 4 applies. The method used in

the system is considered to be included in the system.

Conclusion

31.   Applicant's amendment necessitated the new grounds of rejection presented in

the Office Action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

32.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Wes Tucker whose telephone number is 703-305-6700.

The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for

the organization where this application or proceeding is assigned is (703) 308-5397.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

3900.

Wes Tucker
5-10-04

Jon Chang
Primary Examiner